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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,401	06/23/2005	Akihiko Nishio	L9289.05151	9722

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STEVENS, DAVIS, MILLER & MOSHER, LLP
1615 L. STREET N.W.
SUITE 850
WASHINGTON, DC 20036

EXAMINER	
KHAN, MEHMOOD B	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
10/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,401	NISHIO ET AL.	
	Examiner	Art Unit	
	Mehmood B. Khan	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06/23/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/11/2006 and 06/23/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: Claim 1 contains the term "OFDM" without the proper meaning stated in the claim. The term will be examined as Orthogonal Frequency Division Multiplexing. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 recites the limitation "the other party of communication" in lines 11 and 19-20 on page 34 in claim 1. There is insufficient antecedent basis for this limitation in the claim, which renders the claim indefinite and unclear.

5. Claim 8 recites the limitation "the other party of communication" in line 27 on page 35 in claim 8. There is insufficient antecedent basis for this limitation in the claim, which renders the claim indefinite and unclear.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Frodigh et al. (US 5,726,978 herein Frodigh).

Claim 1, Frodigh discloses a radio communication apparatus **(see Abstract)**, Frodigh discloses a reception section that receives an OFDM signal **(see Col 2, lines 52-53, where Frodigh discloses OFDM, Col 7, line 66, Figure 3A el. 330, where Frodigh discloses a link receiver)**, Frodigh discloses a reception quality measuring section that demodulates the received OFDM signal and measures reception quality of each subcarrier **(see Col 8, line 33-38, Figure 3C, el. 330, 332, 342 and 344 where Frodigh discloses a receiver with a demodulator and signal quality and interference measurement means)**, Frodigh discloses a subcarrier selection section that selects subcarriers having top-ranking reception quality as subcarriers to be used based on a criterion notified from the other party of communication **(see Col 10, lines 15-36, Figure 3A, el. 360, where Frodigh discloses an ACA processor and selection of M subcarriers, Col 7, lines 29-34, where Frodigh discloses measurement messages on a control channel)**, Frodigh discloses an averaging section that averages the reception quality of the subcarriers selected by said subcarrier selection section **(see Col 10, line 60 through Col 11, line 9, where Frodigh discloses averaging)**, Frodigh discloses a reporting section that generates a report value indicating the reception quality averaged by said averaging section and reports the report value generated and information indicating the subcarriers selected by said subcarrier selection section to the other party of communication **(see Col 10, line 60 through Col 11, line 9, where Frodigh discloses sending the results of the measurements)**.

Claim 2, Frodigh discloses wherein said subcarrier selection section selects subcarriers of reception quality equal to or higher than a threshold as subcarriers to be used based on reception quality and a threshold decision against a threshold notified from the other party of communication **(see Figure 5, step 516, where Frodigh discloses a C/I threshold)**.

Claim 3, Frodigh discloses wherein said threshold is controlled adaptively according to an amount of traffic in the own cell and neighboring cells **(see Col 10, lines 30-36, where Frodigh discloses selection of subcarrier based on use of subcarrier in an adjacent channel, it is easily understood by one of ordinary skill in the art not selecting a subcarrier in use in an adjacent channel will increase C/I)**.

Claim 4, Frodigh discloses wherein said subcarrier selection section selects the same number of subcarriers as that notified from the other party of communication **(see Col 10, lines 19-26, where Frodigh discloses reconfiguring)**.

Claim 5, Frodigh discloses wherein said number of subcarriers is controlled adaptively according to an amount of traffic in the own cell and neighboring cells **(see Col 12, lines 40-49, where Frodigh discloses re-assigning of subcarriers)**.

Claim 6, Frodigh discloses wherein said subcarrier selection section selects subcarriers to be used from among the subcarriers restricted beforehand out of all subcarriers **(see Col 7, lines 44-50, where Frodigh discloses number of carriers in the system)**.

Claim 7, Frodigh discloses a communication terminal apparatus comprising the radio communication apparatus according to claim 1 (see Figure 3A, el. 330).

Claim 8, Frodigh discloses a radio communication method (see Abstract), Frodigh discloses selecting subcarriers having top-ranking reception quality as subcarriers to be used based on a criterion notified from the other party of communication (see Col 10, lines 15-36, Figure 3A, el. 360, where Frodigh discloses an ACA processor and selection of M subcarriers, Col 7, lines 29-34, where Frodigh discloses measurement messages on a control channel), Frodigh discloses generating a report value indicating average reception quality of the selected subcarriers and reporting the report value generated and information indicating the selected subcarriers to the other party of communication (see Col 10, line 60 through Col 11, line 9, where Frodigh discloses sending the results of the measurements).

Claim 9, Frodigh discloses a radio communication system (see Abstract), a base station apparatus that sends information which becomes a selection criterion of subcarriers (see Figure 2, el. 200, where Frodigh discloses a base station, Col 7, lines 29-34, where Frodigh discloses measurement messages on a control channel), Frodigh discloses according to an amount of traffic in the own cell and neighboring cells (Col 12, lines 40-49, where Frodigh discloses reconfiguration of carrier subset) to a communication terminal apparatus, Frodigh discloses a communication terminal apparatus that selects subcarriers having top-ranking reception quality as subcarriers to be used based on selection criterion information sent from said base station apparatus and reception quality of each subcarrier (see Figure 3A, el. 330, where Frodigh discloses a link receiver, Col 10, lines 15-36, Figure 3A, el. 360, where Frodigh discloses an ACA processor and selection of M subcarriers, Col 8, lines 33-38, Figure 3C, el. 330, 332, 342 and 344 where Frodigh discloses signal quality and

interference measurement means), and reports a report value indicating average reception quality of the selected subcarriers and information indicating the selected subcarriers to said base station apparatus (**see Col 10, line 60 through Col 11, line 9, where Frodigh discloses sending the results of the measurements**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehmood B. Khan whose telephone number is 571-272-9277. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MBK

Mehmood B. Khan
Examiner
Art Unit 2617

George Eng.

GEORGE ENG
SUPERVISORY PATENT EXAMINER